

US EPA ARCHIVE DOCUMENT

Project Summary (1 page)

Title: Transient Non-Community (TNC) Public Water System Environmental Results Project

Applicant: Massachusetts Department of Environmental Protection (MassDEP)

Project Manager: David Terry, Director of the MassDEP Drinking Water Program
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Total Project Cost: \$281,000.
EPA grant contribution: \$145,000; MassDEP contribution \$136,000

Project Period: October 1, 2009 – September 30, 2012 (three years)

Abstract: The more than 900 TNC systems in Massachusetts serve restaurants or other small commercial establishments. These systems are currently monitored by sanitary surveys, which are completed every five years by MassDEP staff (or an approved contractor) and evaluate total system performance in the areas of administration, operation and maintenance, storage and distribution, treatment, and source protection. MassDEP proposes to transform the program from full on site inspections into an ERP annual certification program. The ERP program would develop survey and certification materials, common performance measures, and a simple rating system to evaluate performance in major areas. Using the survey results submitted by TNC systems as a guide, the program will promote transparent performance evaluation by the public by coordinating ratings with Consumer Confidence Reports. Annual survey certifications would be integrated with the TNC annual statistical report, and would be signed by the system's owner and certified operator. This would be the first drinking water ERP program in the nation, as well as the first for the TNC system sector. It would test the effectiveness of the ERP program design to increase compliance and promote environmental stewardship beyond compliance. The program would also assess the usefulness of a transparent rating system to motivate behavior change, and ultimately, increased compliance rates and protection of drinking water and public health.

Authority and Flexibility: Federal Safe Drinking Water Act. Transient Non-Community Sanitary Survey requirements may need interpretive flexibility from EPA in order to allow a more frequent annual survey to be completed by system owners and certified operators in lieu of on-site and in-person inspections by MassDEP staff every five years.

State Agency Support: The Commissioner of the Massachusetts Department of Environmental Protection is aware of and endorses this project.

Budget Summary (1 page)

State: Massachusetts

Agency: Department of Environmental Protection (MassDEP)

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	Total Project Costs	Total State Leveraged Funds	EPA Funds
Personnel	\$200,000	\$100,000	\$100,000
Travel	\$21,000	\$5,000	\$16,000
Capital Equipment	\$ -	\$ -	\$ -
Supplies	\$10,000	\$10,000	\$ -
Contractual	\$50,000	\$21,000	\$29,000
Other			
TOTAL:	\$ 281,000	\$136,000	\$145,000

Project Narrative (up to 7 pages)

A. Issue / Problem Statement: Each of the more than 900 Transient Non-Community (TNC) public water systems in Massachusetts undergoes a thorough on site full system inspection and management review, or “sanitary survey”, once every five years. Despite a major investment of staff-time, these relatively infrequent surveys have not significantly improved compliance in the last decade, particularly in the areas of source protection and managerial and administrative capacity. MassDEP’s believes an innovative Environmental Results Program (ERP) for this sector will improve compliance, and the sustainability of this sector’s environmental performance, while reducing risks to public health and the environment, and motivating regulated entities to institute beyond compliance actions through a transparent performance rating

B. Background: Most of the approximately 935 TNC systems in Massachusetts are small commercial establishments including restaurants or privately owned businesses. These systems typically monitor for three contaminants (Total Coliform, Nitrogen - nitrate and nitrite and sodium), do not have a fully protected Zone I (immediate recharge area around a groundwater source), and may have land uses in that area that could pose a threat to water quality (such as on-site septic systems). The sanitary surveys for these systems currently evaluate system performance in the following areas: Administration, Operation and Maintenance, Treatment, Storage (if any), Distribution (if any), and Source Protection.

MassDEP proposes to create the first drinking water ERP program in the nation, as well as the first to be used for TNC water systems. The annual survey and certification process would require the owners/operators of TNC systems to execute a survey of their system’s components, assess the system’s administrative capacity, and electronically submit verification of their review to MassDEP’s drinking water program. The sanitary survey program currently in place has historically encouraged TNC owners/operators to annually inspect all system elements – an activity similar to the survey that would be required under this new program. Aligning this certification with the Annual Statistical Report will minimize new paperwork requirements. The electronic form would also permit photographs to be included with the survey results, and would be linked to our existing water quality database. The program will prioritize sustainable compliance through pollution prevention, integrate cross media concerns (such as hazardous material storage) and support environmental management principles that promote an ethic of continuous improvement, beyond compliance and proactive risk reduction. A critical piece to making this program successful will be providing additional technical assistance and education to TNC systems. MassDEP would look to partner with its technical assistance providers (e.g. Rural Community Assistance Program (RCAP) to also assist in the outreach.

The survey information submitted by each TNC system will be evaluated by MassDEP to assess the most difficult areas of compliance, and obstacles to achieving full compliance.

The performance data will be incorporated into a simple rating system that the Department intends to coordinate with the Consumer Confidence Reports.

As a result of the new ERP program, MassDEP expects:

- Increased compliance performance by the sector
- Improved administrative capacity
- Improved source protection efforts
- Cost savings for MassDEP
- Results from testing a transparent performance rating tool to improve compliance / performance
- Better information about the obstacles to compliance and significant problem areas in this sector that can be used to target assistance, enforcement or other tools in the most effective way.

MassDEP is aware of potential regulatory revisions to the total coliform monitoring rule that may change substantive monitoring requirements, as well as oversight requirements for states, for managing this contaminant by this sector. This proposal will allow MassDEP gather information about the most significant obstacles to compliance, and use that information to target state resources (including education, assistance, on site inspections etc.) to achieve the greatest compliance and highest levels of protection. Flexibility from EPA may be required to allow more frequent sanitary surveys to be performed annually by system operators and owners, and for MassDEP to oversee and evaluate the effectiveness of this approach.

Project guidelines and eligibility requirements: The project will be implemented under the state's primacy to administer the Safe Drinking Water Act (SDWA). It will constitute research and demonstration relating to the provision of a dependably safe supply of drinking water. (SDWA, Sections 1442 (a) and (c) (42 U.S.C. § 1(a) and (c)). The project's general focus will encourage improvements in performance through its innovative survey strategy and encourage optimal total system performance, including pollution prevention measures. This focus reflects EPA's Strategic Plan Objective 5.2, to improve environmental performance through pollution prevention and innovation; and Sub-objective 5.2.4, to promote environmental policy innovation. This project supports the goal of clean and safe water.

C. Project Objectives: The project's objective is to improve compliance of the TNC sector, increase public health protection, pollution prevention efforts, administrative capacity and probability of delivery of clean and safe drinking water from these systems. More specific objectives are to:

1. Achieve full and effective participation and execution of surveys by sector
2. Creation of a new simple rating for TNC systems that is transparent and implemented in coordination with the consumer confidence report program.

3. Improved compliance levels from baseline levels in selected areas (administration, treatment source protection for example) or selected indicator activities for this sector.
4. Reduction in the number of contamination events at TNC systems
5. Increased adoption of beyond compliance protective measures (eliminating storage of hazardous chemicals/materials; improved protection of Zone I)
6. Reduce MassDEP staff inspection time, allowing more time for systematic problem solving and emergency response.

D. Methodology or Selected Approach:

Baseline conditions will be assessed from the latest available compliance information, including data from the latest sanitary survey, monitoring and water quality information and enforcement history. MassDEP will analyze the data through the manipulation of our historic compliance data and new ERP sanitary survey results. We propose the key milestones described in the timeline below, and would submit progress reports every six months during the term of the project. A final report will be submitted six months after the end of the project's term.

Estimated Timeline: The project will be implemented in four major phases over three years.

Year 1 (October 1, 2009 – October 1, 2010):

Phase 1: Promulgate new regulations to require annual certification. Begin outreach on new requirements. Prepare electronic submission system and begin developing transparent rating system.

Phase 2: Determine baseline compliance levels, select performance indicators, and develop certification instructions. Conduct significant outreach and education effort to TNC sector.

Year 2 (October 1, 2010 – October 1, 2011)

Phase 3: TNC systems complete first survey and submit electronically to MassDEP for review. Evaluate reporting accuracy with a number of random inspections. Begin data evaluation, during which time MassDEP will identify the most frequent compliance problems (and develop approaches to improve compliance), identify enforcement targets, and evaluate effectiveness of ERP program. During this phase MassDEP would also develop a rating system for TNCs, implement transparent performance rating system (year 1), and incorporate into consumer confidence reporting program.

Year 3: (October 1, 2011 – September 30, 2012)

Phase 4. Continue to implement surveys (year 2) and assess project. Evaluation will compare ERP compliance rates with prior compliance rates. (Some indicators of system performance may be “beyond compliance” indicators, in which pre and post ERP

survey program data could also be compared.) Continue to perform inspections at a random, statistically significant sample of systems to evaluate implementation of promised corrective actions / improvement in areas identified as obstacles to compliance. Assess effectiveness of ratings in consumer confidence reporting program to motivate behavioral change, and increase compliance and protection.

Collaborations and Partnerships. We will seek to collaborate with New England Water Works, RCAP, and other stakeholders capable of providing technical assistance.

Public Involvement. The Consumer Confidence reporting program will incorporate the new, simpler rating system proposed by the ERP sanitary surveys. These reports must be available to a TNC system's consumers through public posting as required by the Act.

E. Outcomes and Measures

The Final Project Evaluation will compare:

- Previous baseline compliance levels in major areas or through selected indicator;
- Identify significant obstacles to compliance, or areas of noncompliance;
- Compliance levels in year 1 and 2 of the ERP certification program;
- Implementation of beyond compliance actions (comparing measures of selected baseline actions and activity levels under the ERP program);
- Impact / Effectiveness of rating system in motivating compliance and beyond compliance actions.
- Drinking water program resource investments in implementing historic sanitary survey program and management of new ERP program.

Past performance – Programmatic Capability and Reporting Results (1 page)

Innovation Grants. Massachusetts has participated in a few innovation grant projects in the past.

In 2007 we began collaborating with the State of Maine as a junior partner in implementing an Innovation Grant award for a stormwater ERP program. Maine is the lead project proponent. Three progress reports have been posted to the website of the Innovation Grant Program for this project. Massachusetts has assisted specifically in facilitating:

- review and approval of program documents (e.g., QAPP and sampling protocol)
- development of Environmental Business Performance Indicators
- development of Maine's self-certification checklist
- articulating the different ERP approaches proposed for Massachusetts and Maine
- development of list of retrofit stormwater BMPS to be used

Work will continue for the three year grant term (through 2010).

In 2005 we were selected as the lead state for the ERP small business common measures project: “Implementing a States Common Measures Project for Improving ERP Compliance Strategies.” This project is expected to be completed in May 2009. Nine regularly submitted quarterly progress reports have been posted on the State Innovation Grant Program website. The project achieved the expected results which will be documented in the final project report.

In 2002 Massachusetts was selected to receive a grant for a Watershed based permitting project for the Assabet River. The Final Report has been submitted for that project. Although work in the project area continues as anticipated, we achieved the project’s objectives to develop and implement a joint and collaborative permitting process for phosphorus in this river basin.

DAVID Y. TERRY

David Terry has been the Program Director for the Massachusetts Department of Environmental Protection's (MassDEP) drinking water program since 1990. In this capacity he is responsible for the oversight of all aspects of the Safe Drinking Water Act including the Underground Injection Control Program and the Source Water Protection Program. In addition, he also oversees MassDEP's administration of the Water Management Act, the state water allocation program. Mr. Terry is a past president of the Ground Water Protection Council and has been a member of the Board of Directors since 1993. He is also a member of the Association of State Drinking Water Administrators. He served on the National Drinking Water Advisory Committee's work groups on source water protection and UIC / Source Protection Program Integration. Mr. Terry has a Masters Degree in Community Planning from the University of Rhode Island and a Bachelors Degree in Geography from Middlebury College.